

AUDIT REPORT NUMBER 98/35812/A01



THIS REPORT RELATES TO AN ASSESSMENT ON 2/25-27/98

| | | |
|---|--------------------------|----|
| Company Name: Marshall Space Flight Center | Other addresses visited: | 1. |
| Address: Bldg. 4201 Huntsville, AL 35812 | 2. | 3. |

| | |
|-----------------|---|
| SCOPE | Procurement, design, development, and on-site production of flight hardware, flight software, and associated ground support equipment interfacing with flight hardware and software |
| ISO 9001 - 1994 | GUIDANCE APPLICABLE: 9000-3 |

CURRENT REVISION OF THE SUBJECT COMPANY'S DOCUMENTED QUALITY SYSTEM

| | | | |
|-------------------|----------------|------|------------|
| POLICY MANUAL | Quality Manual | DATE | 2/98 Rev B |
| PROCEDURES | Various | DATE | Various |
| WORK INSTRUCTIONS | Various | DATE | Various |

| NQA ASSESSMENT TEAM | COMPANY REPRESENTATIVES |
|--|---|
| LEAD ASSESSOR Lee C. Bravener | NAME Robert Schwinghamer POSITION 9000 Management Rep. |
| MEMBER 1 J. Dozier, M. Stevens, J. Lunt, J. Greico | NAME J. Wayne Littles POSITION Center Dir. |
| MEMBER 2 | NAME POSITION |

The contents of this report are confidential to the company as named above and NQA. As such, distribution to persons not under the employ of both parties must be agreed by both parties prior to circulation.

Any non-compliance's and observations contained within this report are the result of limited sampling and therefore it cannot be assumed that others do not exist.

The signature of the company's representative indicates their agreement and understanding of any non-compliance's and observations contained in this report.

Signed:

Position:

R. V. Schwinghamer
Asso. Dir. Technical, MSFC

Signature:

NQA Representative

Date:

2/27/98

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ISO 9000
CLAUSES

AUDIT RECORD

Non Compliances
Or Observations

| | | | |
|------|---|---|---|
| 4.1 | Interviewed the acting Center Director, Director of Science and Engineering, Director of S & QA, and Director of Programs, Assoc. Center Director and ISO Representative. Reviewed the organization Chart and Quality Policy. Reviewed the minutes for the last two Quality Council/Management Review (Jan. & Feb. 98) meetings. Interviewed 25 Center employees to the knowledge of the Center Quality Policy and understanding of program. | 1 | 1 |
| 4.10 | Reviewed Procedure Nos. MSFC-P10.1-C01 thru C03. Interviewed Inspection and test personnel in the areas listed in 4.8 above on the inspection and test requirement. Reviewed the inspector stamp control documentation for inspectors 94Y and 93Q. Reviewed procedures OWI-Ed71-003, Test Operation Procedure and OWI-ED73-P16.1-002, Test Report Control. Reviewed test program ISS-ACPT-ED98-013 in the Vibration West Area. Reviewed inspection documentation for inspection activities performed in the CR30 area for purchase order no H28228D. Reviewed Pyrotechnic Shock Test Procedure No. SRB-QUAL-ED97-107. Reviewed inspection acceptance activities for the SXI Telescope Program. | 1 | 0 |
| 4.11 | Interviewed 5 personnel working on Rocket Test Stands (115 and 500). Inspected Transducers and other measurement and test equipment used within the stands. Inspected items: M65396, 2151A18002, A835ERC, M653379, M627812, Category 1-5 calibration equipment for appropriate tags and calibration dates. Reviewed Procedure No. MSFC-P11.1. Reviewed calibration records for item nos. C09600, C09620, 624659 and 624643. Reviewed calibration procedures NA17-20MD-31 and T.O. 3K6-4-1597-1. Reviewed the control of out of tolerance conditions process. Reviewed Software Validation data taken utilizing procedure no. ED73-VIB-FOP. Reviewed accelerometer calibration data for accels. calibrated on 2/5/98 and due for calibration on 2/5/99. Reviewed MSFC P11.1 REV B Control of inspection measuring & test equipment. (draft copy 2/23/98) audited EB12 power electronics team, looking at equipment, calibration on line list of equipment, list from calibration lab of equipment due for calibration also audited EP93 tracing equipment in need of calibration to insure equipment was properly labeled and not being used until calibrated | 3 | 0 |
| 4.12 | Reviewed procedure nos. MSFC-P12.1. Reviewed the inspection and test status of items reviewed in the areas listed in 4.8 above. Interviewed personnel in those areas on the inspection and test status requirements | 0 | 0 |
| 4.13 | Reviewed Control of Non Conforming Product element with QA Engineer, QA Specialist, and Quality Information Specialist. Sampled procedure P13.1 R/B, P13.1-C01 R/A, P13.1-C02 R/O, S&MA-CR30-QA-Y-012 R/O, and D. R. Nos. 6450, 6514, 6742, 6743, 6745, and 6737. | 2 | 0 |

Customer Complaints Use of NQA Mark

See 4.14

N/A

AUDIT REPORT NUMBER 98/35812/A01



ISO 9000
CLAUSES

AUDIT RECORD

Non Compliances
Or Observations

| | | | |
|------|---|---|---|
| 4.14 | Review log of outstanding copies of Corrective action requests. Selected and reviewed the contents of 26 Corrective action requests for cause identification, corrective action, follow-up. Interviewed responsible administrator. Reviewed timeliness of system. Interviewed three management personnel including ISO Rep. to understanding of system. Closure of previously open nonconformances. Reviewed CA/PA system with 5 quality personnel. Inspected root cause analysis and appropriate closure evidence. Inspected preventive actions initiated from C/A System. | 0 | 0 |
| 4.15 | Reviewed procedure No. MFSC-P15.1-C01 which describes how Program Critical Hardware (PCH) is handled. Reviewed PCH material for P/N SVSK122400-1. Reviewed Flight Hardware Storage Surveillance Reports, dated 1/22/98. Procedures No. CN-41-001. Reviewed shipping memo no. P.8-10.85117. | 0 | 0 |
| 4.16 | Selected and verified for procedure; retention, condition, location, custodian, and retrievability 7 quality record categories; DR's, management meeting minutes, Safety training cert. records, specialty cert. training records, corrective action reports, audit records, receiving inspection reports. Interviewed the custodians of subject records. | 1 | 1 |
| 4.17 | Interviewed Quality Manager (Internal Audits), 2 Lead Auditors, 2 Auditors. Inspected 1998 Audit schedule, auditor credentials, previous audit records from round 1 and round 2 audits. Inspected follow-up activity in round 2 audits resulting from round 1 nonconformances. Reviewed checklists and compliance to appropriate w.i.'s. Reviewed all remaining actions from previous audits. | 0 | 2 |
| 4.18 | Reviewed the program for training records (Administer). Conversion has still not been completed, but maturing nicely. Interviewed the manager for training and staff. Evaluated the "Learning Center" plus self-paced infrastructure and interviewed the staff. Reviewed certification records for skill (soldier, welding, NDI, and ESD) recert. program. Reviewed training tests for ESD Awareness Training. Interviewed the supervisor and technician responsible. Reviewed the records for the safety training awareness training (Forklift, crane, confined space, etc.). Interviewed the supervisor and technician responsible. | 1 | 2 |
| 4.2 | Reviewed and confirmed quality document structure. Reviewed the on-line implementation of electronic format and control of quality documentation. Reviewed the changes to the quality manual. Reviewed examples of quality planning as defined by the client. | 0 | 0 |

Customer Complaints Use of NQA Mark

See 4.14

N/A

AUDIT RECORD

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|------|---|---|---|
| 4.20 | Reviewed Statistical procedures EH21, OWI Problem S&MA CR 10-R-Y-005, OWI S&MA CR 10-R-Y-012 and MSFC-P14.1 REV A 2/3/95 MSFC Standard Procedure CR01 Corrective action system. Audited project 60K Fastrac, Task: TPA Fabrication Support-EH following MIL-HDBK-5G 11/1/94 F Test used to determine whether the strength of two products differs with regard to variability. And I Test used to determine whether two products differ with regard to acreage strength. Audited Statistical and Heuristic problem trending technique applicable to the Aerospace Industry. Problem trending SSME High pressure fuel turbopump turbine blade inner ring cracks - Failure mode and effects analysis classification B200-04-K and SSME Speed and fuel flow sensor intermittent outputs due to shorts - Failure mode and effects analysis classification is J60X-01-A . Results isolate problems to critical areas, evaluating the effectiveness of past recurrence control activities, provide a basis for forecasting near-time recurrence of similar problems based on FEMA Fail mode, cause, and subcause. Also reviewed NCR summary status and reports presented on a weekly basis to the MSFC Implementation Team chaired by the Quality Management Representative. Present reports to the Quality Management Council at every Quality Council Meeting. | 0 | 0 |
| 4.3 | Reviewed Contract Review element with Manager of Plans and Operations Office, Chief Engineers, and Manager of Technology and Investments Office. Sampled procedure LA01-OWI1.0 R/A, PO3.1 R/A, ISO-STP-03 R/C, Cost Realignment Proposal, Thermal Assessment of X-33 Compartments, and LH2 Feedline Waterflow Test. | 1 | 0 |
| 4.4 | Reviewed EDAS program for compliance to standard. Interviewed Deputy Director, Technical Assistance to the Deputy Dir., Design Engineer, Stress Engineer, Configuration Supervisor, Records Admin, Chief Engineer. Reviewed drawings for EDAS Base Enclosure Assembly for materials and stress requirements. Inspected Configuration management plan for Task Agreement requirements and Implementation Plan. Inspected on-line Task Agreement database for input, output, and stress requirements. Inspected Stress Test records for compliance to T/A. | 1 | 1 |
| | Reviewed project Space Station Furnace Facility, Management and Development plan 2353 dated 9/7/94, Software Design Specifications Documentation, System Software Requirements specifications level 3 & 4 MSFC-SPEC-2334 & 2446. Comparing requirements against the PLM design spec. Reviewed SXI Project: Solar-x-ray Imager, from the Preliminary design specifications through Design certification review/Pre-ship review (Design validation). Dated 5/28/97. Matching the design requirements spec-2112a against design specifications spec-2113 against Software test plan spec-2111. Also reviewed SDR's/SCR's against ECR's and code changes. Audited project SPARCLE (Space Readiness Coherent Lidar Experiment) Developed in house - measures Global winds. Using S/W development process description document, organizational Work Instructions EB 41-SS-001. Interviewing the Project Manager and Software Team Lead, starting with the Project plan contents, Configuration management plan, the Design readiness review, System requirements document and the Mission & science requirements Document, checking for proper content, and sign-off authorization. This project will be base-line for readiness Review-meeting will be help 3/2/98. | | |

Customer Complaints Use of NQA Mark

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|-------|---|----|---|
| 4.5 | Reviewed Document and Data Control element with Configuration Management Specialists, Sr. Field Engineer, and Deputy Chief Property Management. Sampled procedure P05.1-C04 R/C, P05.1 R/E, P04.2 R/C, P05.1-C05 R/O, P05.1-C06 R/O, CN31-001 R/A, package # 8773R, SSME # SE-236-28, Dwg. # 50M74991, and procedure OWI-EB13-EP001 R/O. | 1 | 0 |
| 4.6 | Reviewed Purchasing element with the Deputy Director of Procurement Office, PO Contracts Reviewer, and Contracts Specialists. Sampled procedures P06.1-C03 R/A, OWI-8 R/B, Procurement Tracking System, IAR's # 25, # 13, # 14, and # 15. Quality and Non-Quality Sensitive Vendors Lists, vendor files for Machine Craft, Tabor. Banner, Whitesburg, and SCSC Agreement # 97029, and PO # ME248F. | 1 | 0 |
| 4.7 | Reviewed Control of Customer-Supplied Product element with the Deputy Division Chief Propulsion Test Division, Control Systems Branch Chief, and Lead QA Specialist. Sampled procedure P07.1 R/A, DCN 97-RD180-028 R/B, TPS nos. ATL-0543-QI, and ATL-0358-QI and product for the ATLAS IIAR Propulsion Module Hot Fire Test Program in buildings 4670 and 4655. | 0 | 0 |
| 4.8 | Reviewed Procedure Nos. MFSC-P08.1, P08.2-C01, P08.2-C02. Interviewed personnel on the requirements of Product Identification and Traceability as it pertained to their job functions. Reviewed product identification and traceability process the following areas: Incoming Inspection, Composite Lab, Solar Xray Area, Pyrotechnic Shock Area. Vibration Lab West, PCH Department, Storage (4471) and Packaging & Delivery | 0 | 0 |
| 4.9 | Reviewed Procedures Nos. MFSC P09.1-C01 thru C07. Interviewed individuals in the areas listed in 4.8 above on the process that was relevant to their work activities. Reviewed Composite Components Fabrication activities in building 4707, program for L02 Semi Conformal Mini Tank. Reviewed process control activities associated with the Solar Xray Imagers (SXI) telescope, P/N 96M67900-1. | 0 | 0 |
| Total | | 13 | 7 |

Customer Complaints Use of NQA Mark

See 4.14

N/A

AUDIT REPORT NUMBER 98/35812/A01



| Ref No. | Clause No. | NONCONFORMANCE AND OBSERVATIONS RAISED | NC | O |
|---------|------------|---|----|---|
| 1 | 4.1 | The review of the "required attendance" list defined in the charter for the Quality Council and required attendance listed on the distribution sheet "attachment 1" of the minutes for Jan. & Feb. 98 noted a discrepancy. (Corrected on the spot) | NC | |
| 2 | 4.1 | The minutes for the Quality Council Jan. and Feb. 98 were not completely clear about the status of action items. | O | |
| 3 | 4.10 | The engineering approval of deviations indicated for the pretest shock data for Enclosure Shock Qualification Test, TCP# SRB-QUAL-ED97-107 was not documented. | NC | |
| 4 | 4.11 | Evidence of out of calibration equipment found in Test Stand 500 (HP 5328A 2151A18002), employees and contractors do not have on-line access to category listing to verify calibration requirements. | NC | |
| 5 | 4.11 | Evidence of uncalibrated weights found in cabinet on test stand 115 provided and used by the customer. No segregation of customer owned test equipment. | NC | |
| 6 | 4.11 | Calibration areas have not kept up with traceability of equipment, equipment missing and not reported to calibration dept. Calibration department puts out a monthly list stating "Please annotate copy of this report to correct errors and return to the calibration facility (AB35, bldg 4650) or fax to 544-8892." This is not being followed at this time. | NC | |
| 7 | 4.13 | Items purchased under Purchase Order No. H28228D were verified at receiving inspection to have part number discrepancies. However, these discrepancies were not documented in accordance with procedure no. S&MA-CR30-QA-Y-001. | NC | |
| 8 | 4.13 | Filling out of Discrepancy Reports is not being done per procedure P13.1 R/B, para. 6, 13, 14, 15, and 22. Some information is incomplete (i.e., revision levels) or missing entirely. | NC | |
| 9 | 4.16 | Review of procedure for Discrepancy Reports (DR) provided a retention time of a minimum of 3 years unless specified as other in a Quality or Program Plan. Review of records on file revealed that DR's records are being maintained on file for periods far in excess of three years and a plan was unavailable to waive requirement. | NC | |
| 10 | 4.16 | Consideration is not being given to "Archive Records" as part of requirements of Quality Records. | O | |
| 11 | 4.17 | Internal Audit checklist for Internal Software Audits does not contain elements or reference to the ISO 9000-3 guidance document. | O | |
| 12 | 4.17 | Based on review of round 2 audit findings and results, a clearer definition of requirements for follow-up activities and records needs to be defined. | O | |
| 13 | 4.18 | "Admin Star" system for training records not yet fully implemented. | O | |

Signed for Company

Signed for NQA

AUDIT REPORT NUMBER 98/35812/A01



NONCONFORMANCE AND OBSERVATIONS RAISED

NC

o

NC

O

NC

NC

O

NC

NC

Many "administrative" errors and problems noted in the Safety training records for certification training.

- * Missing signatures,
- * Incorrect dates
- * Wrong person signing

Review of ESD Awareness Training roster found multiple copies on file without adequate control of most current copy.

The Changes/Status Log for External Task Agreements is on the Chief Engineer's computer data base but, it is not identified in any MSFC procedures.

EDAS Design iterations between the design engineer and vendor requires documented coordination of drawing/design changes. Currently the design engineer uses only verbal communication for design/drawing changes to and from the vendor.

Traceability missing in ECR's, could not tell what changes were associated with ECR- EB-SXI-97-01 also looked at 4 more ECR's and traceability back to SDR's were not possible without going back to department where corrected and going through team leaders records.

The Repository Documentation procedure CN31-001 R/A, page 5, para. 5, requires sampling surveillance's of class 1 documents on a monthly basis. There are no surveillance reports available for review as objective evidence and the procedure does not state how these surveillance's will be documents.

Contracts Specialist has created a form for Non Quality Assessments which is not formalized in any MSFC procedures.

Signed for Company

Signed for NQA

AUDIT REPORT NUMBER 98/35812/A01



Audit Summary

| | | | | | | | | | | |
|---------|------|------|------|------|------|------|------|------|------|------|
| Clauses | 4.1 | 4.2 | 4.3 | 4.4 | 4.5 | 4.6 | 4.7 | 4.8 | 4.9 | 4.10 |
| Covered | 4.11 | 4.12 | 4.13 | 4.14 | 4.15 | 4.16 | 4.17 | 4.18 | 4.19 | 4.20 |

Recommendations/Follow up Action

The following recommendations and follow up actions are brought to the company's attention. Further comments by the assessment team are made below.

☐ PRE-AUDIT (DOCUMENT QUALITY SYSTEM REVIEW)

1. The company's Documented Quality System is deemed to be . (see 4 below)
2. The pre-assessment date _____ been agreed to and an assessment program _____ been drawn up. (see 4 below)

NOTE: The company is reminded that prior to an assessment visit it must be ensured that the quality system has been implemented, for at least 3 months, understood throughout the organization, completely audited prior to the formal assessment being undertaken, and a formal management review documented.

☐ PRE-ASSESSMENT (INFORMAL ASSESSMENT)

3. The pre-assessment visit has been _____ and the previously agreed assessment dates cannot be confirmed
4. The company is to complete the corrective action plan proforma in their possession detailing how they intend to address all the points raised, the person(s) responsible and the target completion dates. The plan should be returned within 20 workings days to NQA for review/acknowledgement.

NOTE: The company is reminded that prior to an assessment visit it must be ensured that the quality system has been implemented, for at least 3 months, understood throughout the organization, completely audited prior to the formal assessment being undertaken, and a formal management review documented.

☒ ASSESSMENT

5. Registration to ISO 9001 is **SATISFACTORY**. The company is to complete the corrective action plan proforma in their possession detailing how they intend to address all the points raised, the persons responsible and the target dates. The plan should be returned to NQA within 20 working days for review.

6. The corrective action plan will be reviewed against the contents of the report and registration will be confirmed.

☐ SURVEILLANCE

7. The surveillance visit is .
8. The company is to complete the corrective action plan proforma in their possession detailing how they intend to address all the points raised, the person(s) responsible and the target completion dates. The plan should be returned within 20 working days to NQA for review.

NON-COMPLIANCE'S/OBSERVATIONS

Previously raised non-compliance's/observations: **Closed** Reference report No , Item No.(s):

Comments or Concerns of the Assessment Team

Next Visit: 4.17, 4.1, 4.14, 4.16, 4.7, 4.18 Obvious efforts of enthusiastic and dedicated professional staff. Excellent implementation of a very large and complex quality system. Very good feedback from employees on ISO awareness.

DATE OF NEXT VISIT: May 1998

ASSESSMENT PROGRAMME



AUDIT REPORT No: 98/35812/A01

Dates: 2/25-27/98

Company Name: MARSHALL SPACE
FLIGHT CONTROL

Address: BUILDING 4201
HUNTSVILLE, AL 35812

Member 1 LEE C. BRAUNER Day 1

Member 2 LEE C. BRAUNER Day 2

| Time | Location/Department/Function | Location/Department/Function |
|------|---|------------------------------|
| 0830 | | PLANNING |
| 0900 | BRIEF PLANNING | TRAINING |
| 1000 | CORRECTIVE ACTION FOLLOWUP | |
| 1100 | CORRECTIVE ACTION SYSTEM LUNCH | LUNCH |
| 1200 | MANAGEMENT RESPONSIBILITY EXECUTIVE INTERVIEWS | QUALITY RCDS |
| 0100 | | |
| | QUALITY CONCERN MEETING | TRAINING |
| 0200 | QUALITY SYSTEM | QUALITY RCDS |
| 0300 | EXECUTIVE INTERVIEWS | |
| 0400 | | |
| | TEAM MEETING | TEAM MEETING |
| 0500 | ONLY DEBRIEF | DAILY DEBRIEF |

ASSESSMENT PROGRAM



AUDIT REPORT No: 98/35812/A01

Dates: 2/25-27/98

Day: 1-3

Company Name: Marshall Space Flight Center

Address: Bldg. 4201
Huntsville, AL

Member: Mark Stevens, Day 1

Member: Mark Stevens, Day 2

| Time | Location/Function/Department | Location/Function/Department |
|------|---|------------------------------|
| | | 0830 4.4 Hardware Design |
| 0900 | Opening Meeting | 0900 4.4 Hardware Design |
| 0930 | Scheduling | 0930 4.4 Hardware Design |
| 1000 | Closeout of NQA CAP's, 4.14 | 1000 4.4 Hardware Design |
| 1130 | Closeout of NQA CAP's, 4.14 | 1130 Lunch |
| 1200 | Closeout of NQA CAP's, 4.14 | 1200 Lunch |
| 1230 | Lunch | 1230 4.11 (Test Stands) |
| 1300 | Closeout of NQA CAP's, 4.14, 4.17 Internal Audits | 1300 4.11 (Test Stands) |
| 1400 | 4.17 Internal Audits | 1400 4.11 (Test Stands) |
| 1430 | 4.17 Internal Audits | 1430 4.11 (Test Stands) |
| 1500 | 4.17 Internal Audits | 1500 4.11 (Test Stands) |
| 1530 | 4.17 Internal Audits | 1530 4.11 (Test Stands) |
| 1600 | 4.17 Internal Audits | 1600 NQA Team Meeting |
| 1630 | NQA Team Meeting | 1700 Daily Debrief |
| 1700 | Daily Debrief | |
| | | Mark Stevens, Day 3 |
| | | 0800 Follow up |
| | | 0900 Follow up |
| | | 1000 Final Report Prep |
| | | 1130 Lunch |
| | | 1230 Final Report Prep |
| | | 1400 Closing Meeting |
| | | |
| | | |

ASSESSMENT PROGRAMME



AUDIT REPORT No: 98/35812/A01

Dates: 2/25/98 & 2/26/98

Company Name: MSFC

Address: BUILDING 4201
HUNTSVILLE, AL

Member 1 Jim DOZIER

Member 2 Jim DOZIER

DAY 1

DAY 2

| Time | Location/Department/Function | Location/Department/Function |
|------|--|---|
| 0830 | | DAILY IN BRIEF |
| 0900 | OPENING MEETING | QUALIFICATION TESTING (4619) (4.10, 4.12) |
| 1000 | INCOMING INSPECTION BLDG 4705 (4.8, 4.10, 4.12) | TEST CALIBRATION / G4.11 SOFTWARE VALUATION (4.11) |
| 1100 | LUNCH | HANDLING (2.1.1) HANDWRITING (4.15) (4471) |
| 1200 | INCOMING INSPECTION (4705) (4.8, 4.10, 4.12) | LUNCH |
| 0100 | COMPOSITE LAB (477) (4.8, 4.9, 4.12) | STORAGE PACKAGING / DELIVERY CALIBRATION (4650) |
| 0200 | SOLAR XRAY IMAGERS (4.8, 4.9, 4.10, 4.12) | |
| 0300 | HYDROTECHNICAL SLICK TESTING (4619) (4.10) | |
| 0400 | | |
| 0500 | DAILY DEBRIEF | DAILY DEBRIEF |

ASSESSMENT PROGRAMME



AUDIT REPORT No: 98/35812/A01

Dates: 2/27/98

Company Name: MSFL

Address: BUILDING 4201
HUNTSVILLE, AL

Member 1 Jim Dozier
DAY 3

Member 2

| Time | Location/Department/Function | Location/Department/Function |
|------|------------------------------|------------------------------|
| 8:30 | CALIBRATION (4-11) | |
| 0900 | | |
| 1000 | | |
| 1100 | REPORT WRITING | |
| 1200 | LUNCH | |
| 0100 | REPORT WRITING | |
| 0200 | CLOSING MEETING | |
| 0300 | | |
| 0400 | | |
| 0500 | | |

ASSESSMENT PROGRAMME



#1
Day 1

AUDIT REPORT No: 98/35812/A01

Dates: 02/25/98

Company Name: MSFC

Address: Bldg 4201
Huntsville AL 35812

Member 1 Judge Plunt

Member 2

| Time | Location/Department/Function | Location/Department/Function |
|-------|-------------------------------------|------------------------------|
| 0900 | Opening meeting (4.6) Purchasing | |
| 1000 | | |
| 1100 | | |
| 11:30 | Lunch | |
| 1200 | (4.3) Contract Review | |
| 0100 | | |
| 0200 | | |
| 0300 | | |
| 0400 | | |
| 0500 | Daily Debrief/ Closing Meeting | |

ASSESSMENT PROGRAMME



#2
Day

AUDIT REPORT No: 98/35812/A01

Dates: 02/26/98

Company Name: MSFC

Address: Bldg - 4201
Huntsville, AL 35812

Member 1 Judge P. Hunt

Member 2

| Time | Location/Department/Function | Location/Department/Function |
|-------|--|------------------------------|
| 0900 | Opening Meeting (4.6) Purchasing ↓ | |
| 1000 | (4.5) Document & Data Control ↓ | |
| 1100 | ↓ | |
| 11:30 | Lunch | |
| 1200 | (4.13) Control of N/C Product ↓ | |
| 0100 | ↓ | |
| 0200 | ↓ | |
| 0300 | ↓ | |
| 0400 | ↓ | |
| 0500 | Daily Debrief/Closing Meeting | |

ASSESSMENT PROGRAMME

Day #3



AUDIT REPORT No: 98/35812/A01

Dates: 02/27/98

Company Name: MSFC

Address: Bldg - 4201
Huntsville, AL 35812

Member 1 Judge B. Hunt

Member 2 JOSEPH GRIECO
DAY 3

| Time | Location/Department/Function | Location/Department/Function |
|------|---|--------------------------------|
| 0900 | (4.7) Control of Cust. Supplied Product - | STATISTICAL TECHNIQUES 4.20 |
| 1000 | Write Reports | ↓ |
| 1100 | ↓ | Lunch |
| 1200 | Lunch Write Reports | |
| 0100 | ↓ | REPORT Writing |
| 0200 | Closing Meeting | Closing |
| 0300 | | |
| 0400 | | |
| 0500 | | |

ASSESSMENT PROGRAMME



AUDIT REPORT No: 98/05812/AC1

Dates: 2/25-27/98

Company Name: MARSHALL SPACE FLIGHT CENTER

Address: Building 4201 HUNTSVILLE, AL 35812

Member 1 JOE GRIECO

Member 2

DAY 1

DAY 2

| Time | Location/Department/Function | Location/Department/Function |
|------|------------------------------------|---|
| 0900 | SPACE STATION FURNACE FACILITY 4.4 | SPARCLE - SPACE READINESS COHERENT LIDAR EXPERIMENT 4.4 |
| 1000 | | |
| 1100 | | |
| 1200 | Lunch | CALIBRATION 4.11 EB12 POWER ELECTRONICS TEAM LUNCH |
| 0100 | SXI PROJECT SOLAR X-RAY IMAGER 4.4 | CONTINUE EB12 4.11 EP93 - PROPULSION TEST DIV 4.4 |
| 0200 | | |
| 0300 | | |
| 0400 | EOD DEBRIEFING | EOD |
| 0500 | | |